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forming the tungsten plug 21, and a tungsten layer 22 is formed by CVD for forming the second wiring.

Page 13, replace the paragraph beginning on line 8, as follows:

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The manufacturing method of semiconductor devices according to one embodiment of the present invention determines the location of the silicide pads 5, 19 with respect to a polysilicon plug 17 in a self-aligning manner. The above-described effects are thus obtained. Since the above-described process does not require masks for forming silicide pads 5 and 19, the length of the process can be reduced.

IN THE CLAIMS:

Add the following new claims:

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--7. (new) A structure of a semiconductor device, comprising:

a silicon substrate;

a first interlayer insulating film having a first surface connected to said substrate;

a polysilicon contact plug formed through said first interlayer insulating film having a top end surface and a top side surface protruding from a second surface of said first insulating layer;

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a silicide pad formed covering said top end surface and said top side surface of said polysilicon contact plug in a self aligning manner and said silicide pad having a diameter which is larger than a diameter of the polysilicon contact plug, said silicide pad being above said second surface of said first interlayer insulating film.

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cont.

--8. (new) The structure of a semiconductor device according to claim 7, wherein said silicide pad is a refractory metal silicide.

--9. (new) The structure of a semiconductor device according to claim 7, wherein said refractory metal silicide is at least one of titanium silicide, tungsten silicide, molybdenum silicide, tantalum silicide and cobalt silicide.

--10. (new) The structure of a semiconductor device according to claim 7, further comprising:

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a second interlayer insulating film on the second surface of said first interlayer insulating film and on said silicide pad;

a tungsten plug through said second interlayer insulating film and aligned with a center of the polysilicon contact plug, said tungsten plug contacting said silicide pad; and

an aluminum copper alloy connected to said second interlayer insulating film and said tungsten plug.

--11. (new) A structure of a semiconductor device, comprising:

a silicon substrate;

a first interlayer insulating film having a first surface on the substrate;

a polysilicon contact plug through said first interlayer insulating film;

a silicide pad formed on a first surface of said polysilicon contact plug in a self aligning manner and having a diameter which is larger than the polysilicon contact plug, a first surface of said silicide pad being above a second surface of said interlayer insulating film; and

a second interlayer insulating film on said first interlayer insulating film on said silicide pad.

--12. (new) A structure of a semiconductor device according to claim 11, further comprising:

an upper plug on the polysilicon plug and through said second interlayer insulating film and aligned with a center of the polysilicon contact plug;

and a conductive film connected to said second interlayer insulating film and said upper plug.

--13. (new) A method for manufacturing a semiconductor device, comprising the steps of:

forming a silicon substrate;

forming a first interlayer insulating film above the silicon substrate;

forming a first contact hole through the first interlayer insulating film;

forming a polysilicon layer on the first interlayer insulating film, the polysilicon layer filling the contact hole and forming a polysilicon plug;

doping the polysilicon plug with an impurity having an impurity concentration of between 1×10^{20} and 1.5×10^{20} cm^{-3} ; and

forming a silicide pad in a self-aligning manner on the polysilicon plug, the silicide pad having a diameter larger than a diameter of the polysilicon plug, a first surface of the silicide pad being disposed above an upper surface of the first interlayer insulating film.

--14. (new) The method for manufacturing a semiconductor device according to claim 13, wherein said

steps of forming the polysilicon layer and the silicide pad include the steps of:

selectively and partially removing the first insulating film and the polysilicon layer at least in the vicinity of the polysilicon plug such that the polysilicon plug protrudes from the first interlayer insulating layer;

depositing a refractory metal film over the polysilicon plug and the first interlayer insulating layer;

heat treating the refractory metal film, said heat treating step converting first sections of the refractory metal film into a refractory metal silicide and forming reaction products;

removing second sections of the refractory metal film that were not converted into refractory metal silicide, the first sections being the silicide pad; and

removing the reaction products that were formed during the heat treating step.

--15. (new) The method for manufacturing a semiconductor device according to claim 14, wherein the refractory metal is at least one of titanium, tungsten, molybdenum, tantalum and cobalt.

--16. (new) The method for manufacturing a semiconductor device according to claim 13, further comprising the steps of:

forming a second interlayer insulating film on the first interlayer insulating film and on the silicide pad;

forming a second contact hole through the second interlayer insulating film, the second contact hole extending to the silicide pad;

forming a titanium nitride layer on walls of the second contact hole and on the silicide pad;

filling the contact hole with tungsten to form a tungsten plug, the tungsten plug contacting the titanium nitride layer and being connected to the polysilicon plug through the silicide pad and being aligned with a center of the polysilicon plug; and

forming a tungsten layer on the second interlayer insulating film and contacting the tungsten plug.

--17. (new) A method for manufacturing a semiconductor device, comprising the steps of:

forming a silicon substrate;

forming a first interlayer insulating film above the silicon substrate;

forming a first contact hole through the first interlayer insulating film;

forming a polysilicon layer on the first interlayer insulating film, the polysilicon layer filling the contact hole and forming a polysilicon plug;

forming a silicide pad in a self-aligning manner on the polysilicon plug, the silicide pad having a diameter larger than a diameter of the polysilicon plug, a first surface of the silicide pad being disposed above an upper surface of the first interlayer insulating film

forming a second interlayer insulating film on the first interlayer insulating film and on the silicide pad;

forming a second contact hole through the second interlayer insulating film, the second contact hole extending to the silicide pad;

forming a titanium nitride layer on walls of the second contact hole and on the silicide pad;

filling the contact hole with tungsten to form a tungsten plug, the tungsten plug contacting the titanium nitride layer and being connected to the polysilicon plug through the silicide pad and being aligned with a center of the polysilicon plug; and

forming a tungsten layer on the second interlayer insulating film and contacting the tungsten plug.--

Please charge the fee of \$252.00 for the addition of three extra independent claims, added herewith, to Deposit Account No. 250120.